Shrink-Film Configurable Multiscale Wrinkles for Functional Alignment of Human Embryonic Stem Cells and their Cardiac Derivatives.

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Public Summary:
A substrate for cell culture to create tunable multiscaled alignment "wrinkles" for the functional alignment of human embryonic stem cell derived cardiomyocytes.

Scientific Abstract:
A biomimetic substrate for cell-culture is fabricated by plasma treatment of a prestressed thermoplastic shrink film to create tunable multiscaled alignment "wrinkles". Using this substrate, the functional alignment of human embryonic stem cell derived cardiomyocytes is demonstrated.